

REMARKS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the remarks herewith, which place the application into condition for allowance.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-17 are pending.

Claim 1 is independent.

Claims 12 and 13 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicants submit that these claims depend, either directly or indirectly from one of the independent base claims, which are argued below, and as such, are patentable without being rewritten in independent form.

II. REJECTIONS UNDER 35 U.S.C. §102(b) and 103(a)

Claims 1-10 and 14-17 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by the article “An optimization approach for removing blocking effects in transform coding” to Minami et al.

Claim 11 was rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Minami et al.

As understood by Applicants, Minami et al. relates to the reduction of the blocking effect, which can be applied to conventional transform coding, such as JPEG standardized coding, without introducing additional information or blurring. The reduction of the blocking effect is achieved by exploiting a correlation between the intensity values of boundary pixels of two neighboring blocks.

The present invention, as defined by claim 1, concerns a method to rate a discrete decoded picture with respect to its quality. Therefore, a picture quality rating function is calculated based on: (a) information about artifacts within the discrete decoded picture, and (b) coding information that was used for discrete coding the picture.

The information concerning the artifacts is e.g. a criterion of discontinuity (see original claim 2). The criterion of discontinuity is, for example, based on Mean Squared Difference of Slope (MSDS) as disclosed by Minami et al. cited by the Examiner.

In contrast, Minami et al. discloses a method for reducing the blocking effect, which can be applied to conventional transform coding, such as JPEG standardized coding. The goal in Minami et al. is to determine inverse quantized coefficients that minimize the blocking effect (cf. abstract, section IV, and in particular first paragraph of section V). In order to determine said inverse quantized coefficients, a criterion referred to as Mean Squared Difference of Slope (MSDS) is calculated for different sets of inverse quantized coefficients. Then, the set, which reduces the MSDS criterion, is chosen for the transformation of the picture.

The present invention, however, is concerned with a method to rate a discrete decoded picture with respect to quality. Thus, the goal of the invention is not to determine a proper set of inverse quantized coefficients as in Minami et al., but to rate the quality of a certain decoded picture e.g. after such a set of inverse quantized coefficients has been selected. The

invention, thus, builds on prior art optimizing algorithms for decoding, such as the one described by Minami et al.

Furthermore, according to the present invention a picture quality rating function is calculated on the basis of information about artifacts within the discrete decoded picture and coding information that was used for discrete coding picture. As stated on page 4, line 30 of the description of the present invention, the information concerning the artifacts is e.g. a criterion of discontinuity. As further stated on page 5, lines 22 to 24 of the description of the present invention, said discontinuity criterion is e.g. calculated as proposed by Minami et al. that was already cited in the original application documents.

It is, thus, clear that the invention goes beyond the disclosure of Minami et al., in particular because the invention makes use of the findings of Minami et al. in order to calculate a picture quality rating function for rating a discrete decoded picture with respect to its quality.

Applicants submit that Minami does not teach or suggest the above-identified features.

Therefore, Applicants submit that independent claims 1-17 are patentable.

CONCLUSION

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In view of the foregoing remarks, it is believed that all of the claims in this application are patentable and Applicants respectfully request early passage to issue of the present application.

Respectfully submitted,

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